New Combinations in Lycopodium

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About ten years ago, the U. S. National Museum lent a large number of unnamed specimens of tropical American Lycopodiums to Dr. W. Herter, the noted authority on the Lycopodiaceae. Dr. Herter found a number of new species among these collections, which he published in two papers, under the generic name *Urostachys* Herter.

The generic name *Urostachys*, dating from 1922, is antedated by two or three older names for the same concept.[1] However, it does not seem to me either necessary or desirable to split up the genus *Lycopodium*, which certainly seems to be natural, although with plants as old as these and which offer so few characters it is hard to be sure. But I agree with Boivin,[2] that if one begins to split up *Lycopodium* it will be necessary to recognize not just two genera but five or more, which is surely extreme, considering the inadequate present state of our knowledge of the gametophytes, life history, and anatomy of the species.

Apparently, this group of *Lycopodium* is rich in species. for most of those described by Herter seem to be well founded. Many of the specific epithets chosen by Herter are fanciful, derived from the names of mythical personages (*cassandrae*, *dianae*, *poseidonis*) or stars (*arcturi*, *capellae*, *stellae-polaris*, *crucis-australis*) or both (*castoris*), but why not? There are too many humdrum *hirsutums* and *acuminatums*.

In order to refer in identification lists and otherwise to the various new species described by Herter based on material in the U. S. National Herbarium, I propose the following new combinations:

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[1]See Hans Peter Fuchs, Urostachys nomen genericum conservandum?", Verh. Naturf. Ges. Basel **66**: 33–48. 1955.

[2]Bernard Boivin, "The Problem of Generic Segregates in the Form-Genus Lycopodium," Amer. Fern Jour. **40**: 32-41. 1950.

LYCOPODIUM **arcturi** (Herter) Morton, *comb. nov.*
Urostachys arcturi Herter, Rev. Sudamer, Bot. **10:** 118. 1953.
LYCOPODIUM **arthurii** (Herter) Morton, *comb. nov.*
Urostachys arthuri Herter, op. cit. 114.
LYCOPODIUM **bonae-voluntatis** (Herter) Morton, *comb. nov.*
Urostachys bonae-voluntatis Herter, *op. cit.* 112.
LYCOPODIUM **buesii** (Herter) Morton, *comb. nov.*
Urostachys buesii Herter, *op. cit.* 126.
LYCOPODIUM **capellae** (Herter) Morton, *comb. nov.*
Urostachys capellae Herter, op. cit. 114.
LYCOPODIUM **cassandrae** (Herter) Morton, *comb. nov.*
Urostachys cassandrae Herter, *op. cit.* 116.
LYCOPODIUM **castoris** (Herter) Morton, *comb. nov.*
Urostachys castoris Herter, *op. cit.* 111.
LYCOPODIUM **chamaeleon** (Herter) Morton, *comb. nov.*
Urostachys chamaeleon Herter, Amer. Fern Jour. **48:** 82. 1958.
LYCOPODIUM **costaricense** (Herter) Morton, *comb. nov.*
Urostachys costaricensis Herter, *op. cit.* 83.
LYCOPODIUM **crucis-australis** (Herter) Morton, *comb. nov.*
Urostachys crucis-australis Herter, Rev. Sudamer. Bot. **10:** 119. 1953.
LYCOPODIUM **cuatrecasasii** (Herter) Morton, *comb. nov.*
Urostachys cuatrecasasii Herter, *op. cit.* 123.
LYCOPODIUM **dianae** (Herter) Morton, *comb. nov.*
Urostachys dianae Herter, *op. cit.* 116.
LYCOPODIUM **ewanii** (Herter) Morton, *comb. nov.*
Urostachys ewanii Herter, *op. cit.* 126.
LYCOPODIUM **hystrix** (Herter) Morton, *comb. nov.*
Urostachys hystrix Herter, *op. cit.* 120.
LYCOPODIUM **innocentium** (Herter) Morton, *comb. nov.*
Urostachys innocentium Herter, *op. cit.* 127.
LYCOPODIUM **killipii** (Herter) Morton, *comb. nov.*
Urostachys killipii Herter, *op. cit.* 128.
LYCOPODIUM **leptodon** (Herter) Maxon, *in sched., comb. nov.*
Urostachys leptodon Herter, *op. cit.* 120.
LYCOPODIUM **macbridei** (Herter) Morton, *comb. nov.*
Urostachys macbridei Herter, *op. cit.* 115.
LYCOPODIUM **poseidonis** (Herter) Morton, *comb. nov.*
Urostachys poseidonis Herter, *op. cit.* 122.
LYCOPODIUM **socratis** (Herter) Morton, *comb. nov.*
Urostachys socratis Herter, *op. cit.* 117.
LYCOPODIUM **stellae-polaris** (Herter) Morton, *comb. nov.*
Urostachys stellae-polaris Herter, op. cit. 121.

LYCOPODIUM **trachyloma** (Herter) Maxon, *in sched., comb. nov.*
Urostachys trachyloma Herter, *op. cit.* 113.
LYCOPODIUM **ulixis** (Herter) Morton, *comb. nov.*
Urostachys ulixis Herter, *op. cit.* 115.

Herter's reasonably good work was not duplicated by that of his student Hermann Nessel, whose book "Die Bärlappgewachse" added little to our knowledge of the group. However, some of the species described by Nessel are good, and one of them is rather common in the Andes of Colombia:

LYCOPODIUM **wohlberedtii** (Nessel) Morton, *comb. nov.*
Urostachys wohlberedtii Nessel, Repert. Sp. Nov. Fedde **39:** 69. 1935.

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Some Hints for the Fern Culturist[1]

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The culturing of ferns in all of its phases is of intense interest to many of our members. One of the most challenging aspects of this hobby is raising ferns from spores and bringing the sporelings to maturity. A few of the more important articles on this subject are those by Hires (1940), Benedict (1955) Kleinschmidt (1952, 1957), Boydston (1958). Fliflet (1961) summarizes much of the former material on growing ferns from spores, and there is very little new that can be added.

Fern enthusiasts might, however, be interested in a new substrate for spore culture. The name of this material is *Turface*. It is a ground, calcined, clay product designed as a soil amendment to loosen soil, stimulate root growth and for similar gardening uses. It is manufactured by the Wyandotte Chemical Corporation, J. B. Ford Division, Wyandotte, Michigan. Currently it is sold in 50-pound bags but it is my understanding that it is soon to come out in smaller quantities and sold through chain stores. Spores can be sown on any reasonable substrate, of

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[1]Contribution No. 63-1 from the Department of Botany and Plant Pathology, Michigan State University. Photograph by Phillip Coleman.